ABSTRACT

METHOD FOR FABRICATION OF MAGNETIC WRITE HEAD WITH SELF ALIGNED POLES

A method for fabrication of magnetic write heads for disk drives in which a P1 layer is formed having a P1 Protrusion, the P1 Protrusion having a longitudinal reference axis. A gap layer is deposited on the P1 Protrusion and a layer of fill material is deposited on the gap layer. The fill material layer is shaped to form a mold which surrounds a hollow which is aligned with the longitudinal axis of the P1 Protrusion. This hollow in the fill material layer is filled with P2 pole material to form a P2 pole which is then automatically substantially aligned with the longitudinal axis of the P1 Protrusion.

METHOD FOR FABRICATION OF MAGNETIC WRITE HEAD WITH SELF ALIGNED POLES

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2	longitudinal axis
20	P1
22	N3 high moment layer
24	P1 Protrusion layer
26	P1 Protrusion
28	gap layer
30	SiO2 fill
32	SiO2 fill protrusion
34	RIE masking layer
35	opening
36	RIE mask
38	hollow shaft
39	mold mask
40	endpoint layer
42	P2
44	mushroom portion
46	flat top pole portion
48	write gap
50	P1/gap/P2 structure
52	track width
54	second fill material layer
56	Al2O3 protrusion